

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended) A system for assisting regeneration of a particle filter integrated in an exhaust line ~~[[3]]~~ of a motor vehicle diesel engine ~~[[1]]~~, the engine ~~[[1]]~~ being associated with various units, including:

- means ~~[[2]]~~ for admitting air into the engine;
- means ~~[[4]]~~ for recycling exhaust gases from the engine to the inlet thereof;
- a turbocompressor ~~[[5]]~~;
- a particle filter ~~[[7]]~~;
- a common system ~~[[8]]~~ for feeding fuel to the cylinders of the engine, including electrical fuel injectors ~~(9, 10, 11, 12)~~ associated with those cylinders;
- means ~~[[16]]~~ for adding to the fuel an additive adapted to be deposited on the particle filter ~~[[7]]~~ to reduce the combustion temperature of particles trapped therein;
- means ~~(20, 21, 22)~~ for acquiring information relating to various operating parameters of the engine and the units associated therewith; and
- means ~~[[17]]~~ for monitoring the operation of the air admission means, the recycling means, the turbocompressor and/or the fuel feeding system in order to monitor the operation of the engine, these monitoring means being further adapted to trigger a phase of regeneration of the particle filter ~~[[7]]~~ by combustion of the particles trapped therein by triggering a phase of

multiple injection of fuel into the cylinders of the engine during their expansion phase;

~~the system being characterized in that~~ wherein the particle filter ~~[[(7)]]~~ is impregnated with a catalyst for oxidizing hydrocarbons and CO present in the exhaust gases flowing through said particle filter.

2. (Currently Amended) A system according to claim 1, ~~characterized in that~~ wherein said catalyst is a metal or a mixture of metals.

3. (Currently Amended) A system according to claim 2, ~~characterized in that~~ wherein said metal is a group VIII metal, such as platinum, palladium, or rhodium, or a mixture of such metals.

4. (Currently Amended) A system according to ~~any one of claims~~ claim 1, wherein to 3, ~~characterized in that~~ the particle filter ~~[[(7)]]~~ has a region ~~[[(27)]]~~ that is more strongly impregnated with the oxidation catalyst.

5. (Currently Amended) A system according to claim 4, wherein ~~characterized in that~~ said more strongly impregnated region is situated at the centre of the cross-section of the particle filter ~~[[(7)]]~~.

6. (Currently Amended) A system according to claim 4, wherein ~~or claim 5, characterized in that~~ said more strongly impregnated region is situated at the inlet of the particle filter ~~[[(7)]]~~.

7. (Currently Amended) A system according to claim 5, wherein ~~or claim 6,~~ characterized ~~in that~~ the area of said more strongly impregnated region ~~[(27)]~~ represents from 20% to 70% of the cross-section of said particle filter ~~[(7)]~~.

8. (Currently Amended) A system according to ~~any one of claims~~ claim 4, wherein ~~to 7,~~ characterized ~~in that~~ the more strongly impregnated region ~~[(27)]~~ occupies from 10% to 50% of the length of the particle filter ~~[(7)]~~ starting from its inlet face ~~[(28)]~~.

9. (Currently Amended) A system according to ~~any one of claims~~ claim 2, wherein ~~to 8,~~ characterized ~~in that~~ the terminal portion ~~[(31)]~~ of the particle filter ~~[(7)]~~ is not impregnated with the oxidation catalyst.